

EXHIBIT 173

to Space Data's Opposition to Defendants'
Motion for Summary Judgment

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16 UNITED STATES DISTRICT COURT
17 NORTHERN DISTRICT OF CALIFORNIA
18 SAN JOSE DIVISION

19 SPACE DATA CORPORATION,
20 Plaintiff,
21 v.
22 ALPHABET INC. and GOOGLE LLC,
23 Defendants.

Case No. 5:16-cv-03260-BLF

**DEFENDANTS' RESPONSIVE CLAIM
CONSTRUCTION BRIEF**

Judge: Hon. Beth Labson Freeman

Date Filed: June 13, 2016

Trial Date: August 5, 2019

determining mechanism, gas vent, or ballast release—it merely states that they are “connected.” ’941 at 21:30-33. Moreover, the Federal Circuit has already rejected Space Data’s reasoning, as the fact that “portions of the claim [] describe inputs and outputs at a very high level . . . does not describe how the [control signal processor device] interacts with other components . . . in a way that might inform the structural character of the limitation-in-question or otherwise impart structure to the [control signal processor device] as recited in the claim.” *Williamson*, 792 F.3d at 1351. Claim 7 is a means-plus-function claim lacking a corresponding structure and should be ruled indefinite.

D. “determining a desired movement of the target balloon based on the determined locations of the one or more neighbor balloons relative to the determined location of the target balloon” / “determine a desired movement of the balloon based on the determined locations of the one or more neighbor balloons relative to the balloon’s determined location”

Claims	Plaintiff’s Proposal	Defendants’ Proposal
’193 Claims 1, 17	Plain meaning, no construction necessary	Determining where to position a particular balloon as a function of the distance between the balloon’s location and the location of neighboring balloons to maintain a desired network topology

The parties disagree as to the appropriate meaning and scope of this claim term, and construing this claim term can only aid the jury in analyzing alleged infringement. *See O2 Micro Int’l. Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008) (“A determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate when a term has more than one ‘ordinary’ meaning or when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.”); *see also Phillips*, 415 F.3d at 1314 (“[plain and] ordinary meaning” of technical terms is only helpful when that meaning is “readily apparent even to lay [people]”); *Control Resources, Inc. v. Delta Elecs., Inc.*, 133 F. Supp. 2d 121, 127 (D. Mass. 2001) (“In the end, claim construction must result in a phraseology that can be taught to a jury of lay people. It is not enough simply to construe the claims so that one skilled in the art will have a definitive meaning. The claims must be translated into plain English so that a jury will understand.”).

1 Notably, both parties rely on the specification of another patent in support of their
 2 proposals: U.S. Patent No. 8,820,678¹⁴ to DeVaul, et al, which is assigned to Google. Space Data
 3 copied some of Google’s patent claims so as to provoke an interference proceeding; therefore, as
 4 Space Data concedes, the specification of the ’678 patent provides evidence regarding claim
 5 meaning.¹⁵

6 Space Data challenges Google’s proposal for including the phrase “as a function of the
 7 distance” between balloons, *i.e.*, the relative position of one balloon to another. In so doing,
 8 Space Data ignores the ’678 patent, which focuses on the idea of using an “energy function” to
 9 determine how balloons should move to maintain their desired spacing. *See* ’678 patent at 4:3-9;
 10 7:56-67; 9:29-35; 10:19-27; *see also* claim 13. This idea can be analogized to the concept of a
 11 “virtual spring.” *Id.* at 16:4-14. That is, when balloons get too close to one another, the energy
 12 function operates to push them apart; conversely, when balloons get too far apart, the virtual
 13 energy of the spring pulls them together. *See id.* Of course, the ’678 patent is not limited to the
 14 concept of a virtual spring, and discloses other ways to calculate a “potential energy function.”
 15 *See id.* at 18:14-19 (“Although the above discussion refers to potential energy functions that are
 16 based on virtual springs, it is to be understood that other types of potential energy functions could
 17 be used. In general, the potential energy, *U*, of a target balloon may be a function of the locations
 18 of the target balloon and *n* neighbor balloons”); *see also id.* at 18:28-30 (“In some
 19 embodiments, the potential energy could be a function of the distances between the target balloon
 20 and each of the *n* neighbor balloons.”). But the claim language should be construed to capture the
 21 ’678 patent’s basic idea of determining how to move a balloon as a “function of” distance to a
 22 neighbor balloon. *See Phillips v. AWH Corp.*, 415 F.3d at 1316.

23 Space Data’s analogy regarding balloons flying near the DMZ is particularly inapt for this
 24 claim term. Regardless whether one considers the “plain meaning” or Google’s proposal, the at-
 25 issue language relates to the *relative* location of one balloon from other *balloons*—not geographic
 26 borders. This is highlighted by the fact that claim 12 of the ’193 patent separately calls for

27 ¹⁴ Exhibit 26 to Hosie Decl., ECF No. 250-28

28 ¹⁵ Of course, the fact that the specifications and prosecution histories are different can, pursuant
 to *Phillips v. AWH*, result in a different interpretation of identical claim language.

“determining a location of at least one of the balloons with respect to a geographic border.” ’193 patent at 51:25-30. Accordingly, the language about “determining a desired movement . . . based on” the location of neighboring balloons “relative to” the target balloon’s location fairly calls for positioning as a function of the distance between the balloons’ locations.

Space Data also unjustifiably critiques Google for including the clause “to maintain a desired network topology.” This is what the ’678 patent *repeatedly* refers to as the purpose of the invention. See ’678 patent at 7:22-31; 7:56-58; 9:29-39; 10:21-27; 13:5-7; 14:48-59; 15:12-20; 20:10-20; 21:46-48; 23:41-43. Moreover, Space Data equated that idea with even spacing. Specifically, in seeking to institute an interference proceeding, Space Data had to demonstrate where in its pending specification it could identify support for the claimed subject matter. To that end, Space Data pointed to the following material in the published application 2014/0367511:

determining a desired movement of the target balloon based on the determined locations of the one or more neighbor balloons relative to the determined location of the target balloon, wherein the desired movement of the target balloon comprises a desired horizontal movement of the target balloon; and	<p>When the balloons are not evenly spaced apart, “the SNS platforms may be raised or lowered in altitude by gas venting or ballast drop in order to catch prevailing winds favorable to keep the SNS platforms evenly spaced apart.” ¶[0052]. Thus, a desired movement of the target balloon is determined based on the determined locations of the one or more neighbor balloons relative to the determined location (relative spacing) of the target balloon.</p> <p>For the platforms to be “evenly spaced apart” their motions must have a horizontal component. The skilled artisan would understand that the prevailing winds, described as the mechanism for “keep[ing] the SNS platforms evenly spaced apart” include horizontal components.</p>
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See Pransky Decl., Ex. 2 at SD_029685 (emphases added). Given Space Data’s own interpretation of the language as requiring even spacing, as well as the public-notice function of the specification and prosecution history, Space Data should be held to a construction that includes the concept of maintaining at least a “desired network topology,” if not “even spacing.”

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Respectfully submitted,

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